Volume 305 **CONTENTS** 25 December 1995

Unsteady separation and heat transfer upstream of obstacles. R. I. PUHAK, A. T. DEGANI and J. D. A. WALKER *page* 1

Dusty-gas flow in a laminar boundary layer over a blunt body. E. S. ASMOLOV 29

Numerical simulation of coastal upwelling and interfacial instability of a rotating and stratified fluid. YAN ZANG and ROBERT L. STREET 47

Solution breakdown in a family of self-similar nearly inviscid axisymmetric vortices. R. FERNANDEZ-FERIA, J. FERNANDEZ DE LA MORA and A. BARRERO 77

Two-dimensional vortex motion in the cross-flow of a wing–body configuration. T. W. G. DE LAAT and R. COENE 93

Liquid-metal flow in an insulated rectangular expansion with a strong transverse magnetic field. JOHN S. WALKER and BASIL F. PICOLOGLOU 111

Coherent motions and heat transfer in a wall turbulent shear flow. Y. NAGANO and M. TAGAWA 127

A numerical study of turbulent supersonic isothermal-wall channel flow. G. N. COLEMAN, J. KIM and R. D. MOSER 159

Compressible turbulent channel flows: DNS results and modelling. P. G. HUANG, G. N. COLEMAN and P. BRADSHAW 185

Thermo-viscous fingering of flow in a thin gap: a model of magma flow in dikes and fissures. KARL R. HELFRICH 219

Effects of temperature-dependent viscosity on flow in a cooled channel with application to basaltic fissure eruptions. JONATHAN J. WYLIE and JOHN R. LISTER 239

Scattering by a periodic array of rectangular blocks. M. FERNYHOUGH and D. V. EVANS 263

Compressible magnetoconvection in three dimensions: planforms and nonlinear behaviour. P. C. MATTHEWS, M. R. E. PROCTOR and N. O. WEISS 281

Inviscid separated flow over a non-slender delta wing. D. W. MOORE and D. I. PULLIN 307

Deep-water internal solitary waves. ANDREW P. STAMP and MARCUS JACKA 347

REVIEWS

Mobile Particle Systems, edited by E. Guazzelli and L. Oger 372

Introduction to Nonlinear Science, by G. Nicolis 372

Computational Modeling for Fluid Flow and Interfacial Transport, by W. Shyy 373

SHORT NOTICES 373

INDEX TO VOLUME 305 376

SCHEDULE OF INTERNATIONAL CONFERENCES ON FLUID MECHANICS 378